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AQD Matters

In-house newsletter of the SEAFDEC Aquaculture Department, Tigbauan, Iloilo

AQD assists in HRD training in Lao PDR

From top: Trainees actively participate in the open forum; harvesting tilapia from the culture pond; the participants after successfully completing the training course

Lao PDR played host to the first session of the *Human resources development (HRD) on-site training course on rural aquaculture* from September 1 to 7.

The training, aimed to build the capacity of farmers in rural aquaculture to improve their livelihood and alleviate poverty, was conducted in the Nalao clusters of PhonHong District, Vientiane Province.

Scientist Dr. Maria Rowena Eguia and Training and Information Division Head Mr. Renato Agbayani provided technical and logistical support during the training, which was coordinated by Ms. Nouhak Liepvisay and Mr. Akhane Phomsouvanh of the Lao PDR Department of Livestock and Fisheries (DLF). The training gave Ms. Liepvisay the opportunity to share the skills and knowledge she acquired as one of the participants in the *Training of trainers on HRD* held at AQD last November 10-19, 2008.

The first leg of the training focused on freshwater aquaculture, particularly in tilapia and integrated fish farming/polyculture. Topics discussed during the seven-day activity included site selection; cage/pond design and construction; water and fish health management; seed production, nursery and grow-out techniques for tilapia and other freshwater species; feeds and feeding; and costs-and-returns analysis. Also scheduled were field demonstrations and visits to the Agricultural Development and Service Center, the fish processing areas in Vang Vieng, and the farm site of one of the trainees.

The trainees found the training generally satisfactory. According to Dr. Eguia, the training was a work-in-progress, with a flexible schedule where topics varied depending on the needs and demands expressed by the trainees.

The training in Lao PDR was the first in a series of 8 sessions, with one each to be conducted in 8 SEAFDEC member-countries.

The training series is being implemented by SEAFDEC as a center-wide project under the *HRD on poverty alleviation and food security by fisheries intervention in the ASEAN region*. It is funded by the Japan-ASEAN Solidarity Fund of the ASEAN Foundation.

Stratplan meeting at AQD

AQD senior staff gathered at the TID Conference Room for the *Review and planning meeting* from September 16 to 18.

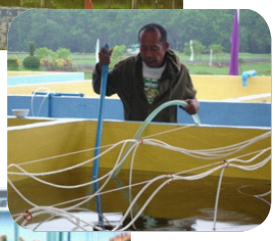
The objectives of the meeting were to (1) review the progress of activities implemented in 2009 and ensure that these are within the agreed strategic objectives for 2012; (2) discuss planned activities for 2010 and assess any changes to AQD's strategic plan; and (3) ensure harmonization and complementation of activities among the four AQD divisions.

AQD Chief Dr. Joebert Toledo gave his opening remarks and presented AQD's new vision and mission. He also stated that for 2010, the SEAFDEC Council has advised AQD to slowly change its approach from being commodity-based to a thematic one.

Presented during the 3-day activity were the accomplishments and plans of AQD's departmental programs (marine fish, crustaceans, molluscs, seaweeds, small-holder freshwater aquaculture, and aquatic ecology), regional programs (stock enhancement, fish disease surveillance, and sustainable aquaculture), other R&D activities (ABOT AquaNegosyo, ICD-SA, training & information) and administration & finance (budgeting & accounting, human resources management, support services). An open forum followed each session to discuss issues, problems and recommendations. Some of these concerns included climate change, reducing pollution, upgrading of AQD infrastructure, intellectual property rights (IPR), and internal auditing protocols.

Dr. Toledo closed the meeting by saying that AQD remains steadfast in its goal to develop science-based aquaculture technologies. He urged everyone to "move forward, and create the change that we desire. Let's do it!"

ICD-SA project updates in MisOcc



From top: Misamis Occidental Aquamarine Park, site of the MOAP hatchery; Mr. Tito Piloton, MOAP Hatchery Manager; hatchery staff harvest *Artemia* nauplii

The *Institutional capacity development for sustainable aquaculture* (ICD-SA) project is in full swing in the province of Misamis Occidental. Senior Information Assistant Mr. Rosenio Pagador was in the province from September 24 to 26 to monitor the status of three project sites.

MOAP hatchery. The hatchery at the Misamis Occidental Aquamarine Park (MOAP), which was completed last December 2008, consists of 2 broodstock tanks, 8 larval rearing tanks, 12 natural food tanks, a reservoir, and a generator.

According to Mr. Tito Piloton, the aquaculturist in-charge of the MOAP hatchery, 50 grouper (*Epinephelus fuscoguttatus)* broodstock were purchased from Cebu but only 10 survived. The good news, however, was that after about two months of conditioning, the broodstock first spawned last August 27, producing about 15 million eggs. The eggs were subsequently hatched into larvae and stocked in 8 larval rearing tanks. Another spawning occurred September 21-23, wherein 22 million eggs were collected. Two natural food tanks were converted to larval rearing tanks to accommodate the additional production.

In addition, MOAP started accepting on-the-job trainees last July 2009. Future plans include the conduct of an on-site training course on fish hatchery and the construction of additional larval rearing tanks, a feed mill, and mariculture cages to be set up in Panguil Bay.

PACAP-MOAVEC. Located in the municipality of Panaon, the PACAP-MOAVEC (Philippine Australia Community Assistance Program-Misamis Occidental Aquaculture Ventures Corp.) site consists of 32 nursery cages and 16 grow-out cages, all of which were stocked with grouper (*E. fuscoguttatus, E. coioides* and *E. akaara*), pompano and milkfish.

PACAP-MOAVEC started granting PhP280,000 in loans for each of the seven people's organizations (POs) in the municipalities of Sinacaban, Panaon, Jimenez and Tudela for the construction of cages and for purchasing feeds and fingerlings.

Gata Daku. This site, situated in the municipality of Sinacaban, has four nursery cages stocked with 4-5-inch grouper *E. coioides* and three grow-out cages with grouper weighing about 400 grams each.

The Gata Daku Multi-Purpose Cooperative, which operates the site, encountered some problems, which included discrepancies in weighing, difficulty in transporting live harvest-sized grouper, and the inability of suppliers to provide grouper feed in small orders.

Despite these problems, the first run of the project was a success, with sales of grouper amounting to about PhP700,000.

Milkfish cage culture training in Guimaras

(Clockwise from top) Resource speakers for Module 3 of the milkfish cage culture project include Mr. Agbayani, Mr. Gaitan, Ms. Baticados, Ms. Tormon and Dr. Amar (in lab gown)

A total of 92 participants from the barangays of Igang, Magamay and Sto. Domingo in Nueva Valencia, Guimaras advanced to Module 3 of Phase 2 of the *Season-long training course on milkfish cage culture*, which is a collaborative project between AQD, Petron Foundation Inc, and Citi Philippines.

The training took place at the Nueva Valencia Municipal Gymnasium from September 24 to 25.

The trainees learned about aquaculture business planning and sustainable management from Mr. Renato Agbayani, Head of AQD's Training and Information Division. Scientist Dr. Edgar Amar then lectured on fish disease management, followed by a practical session on how to prepare and send fish samples to the laboratory for disease analysis.

On the second day, Igang Marine Station Head Mr. Albert Gaitan talked about cage culture design. He also discussed the factors to consider in cage setup, and the advantages and limitations of rearing fish in cages.

Financial analysis in aquaculture was tackled by Senior Technical Assistant Ms. Dianne Hope Tormon. The trainees learned concepts such as return-on-investment and break-even production and how to analyze these to determine the profitability of the project.

Researcher Ms. Didi Baticados discussed the development and management of cooperatives for sustainable aquaculture. She stressed that the success of the organization depends on the cooperation among the members.

A survey on business organizations and arrangements for managing a fish cage culture project was conducted by Ms. Tormon after the lectures.

Abalone symposium, dialogue in Thailand

Mr. Encena discusses the Philippine abalone industry during the symposium

Senior Technical Assistant Mr. Vincent Encena II presented the country technical report on *The Philippine abalone industry: status, research and aquaculture potential* at the *7th International abalone symposium* held in Pattaya, Thailand from July 19-24.

The symposium brought together scientists, growers, suppliers, buyers, distributors, managers, regulators and policy/decision makers who are interested in abalone fisheries and aquaculture.

Other countries which presented reports on their abalone industries included Australia, Chile, China, Japan, Mexico, New Zealand, South Africa, Thailand and the United States.

Topics on pathology & diseases; fisheries & ecology management; genetics & biotechnology; biology & physiology; larval biology; and nutrition & biochemistry were also tackled.

The symposium participants also toured the Sichang Marine Science Research and Training Station's abalone hatchery in Koh Sichang under the management of Chulalongkorn University.

Mr. Encena also participated in the World Wildlife Fund-Abalone Aquaculture Dialogue (WWF-AAD), which was held last July 25-26. The WWF-AAD is a series of meetings geared towards developing global environmental standards for farmed abalone. Mr. Encena volunteered to be a steering committee member of WWF-AAD. In addition, he represents the Philippines in the International Abalone Society (IAS).

Discussion on impact assessment methodologies

Scientist Dr. Maria Lourdes Aralar participated in the *Roundtable discussion on impact assessment methodologies in the fisheries sector* from September 9-10 at PCAMRD (Philippine Council for Aquatic and Marine Research and Development), Los Baños, Laguna.

After the two-day discussion, the participants came up with a protocol on impact assessment, including the steps and methodologies in the aquatic and marine resources sector; and programs & activities in the fisheries sector ready for impact assessment evaluation.

Dr. Aralar (seated, 3rd from left) together with workshop participants from PCAMRD and University of the Philippines Los Baños

Among the programs prioritized for impact assessment include the *National seaweed R&D program*, the *UNDP-GAINEX* (United Nations Development Programme–Gain Export) *program on milkfish*, and the *Genetic selection for salinity tolerant tilapia through hybridization*. The *Fisheries school on the air*, as well as the *PCAMRD graduate research fellowship program* will also be evaluated. PCAMRD will fund the impact assessment of completed programs.

Research seminar at AQD

A research seminar on the *Effect of probiotics treatment on kuruma shrimp* Marsupenaeus japonicus *reared in a closed recirculating system* was held last September 24 at the RD Audiovisual Room.

The speaker, Dr. Hideo Mochizuki of the Borneo Marine Research Institute based in Sabah, Malaysia evaluated the effect of probiotics on the growth, survival and immunity of *M. japonicus* against *Vibrio* bacteria. The experimental shrimp were divided into four groups: (1) the control group, fed with the control diet and reared in the water without probiotics; (2) the probiotics diet group, fed with a diet containing probiotics and reared in water without probiotics; (3) the water supply group, fed with the control diet and reared in water with probiotics; and (4) the combination group, with probiotics added into the diet and rearing water.

Results showed that growth in three groups treated with probiotics were significantly higher than in the control group. The number of *Vibrio* bacteria in the shrimp bodies and in the rearing water in probiotics-treated groups were significantly smaller than that in the control group.

Golden harvest: out-of-school-youth find success in seaweed farming

by Alfred T. Allaga, SPE3 Project Leader, Philippine Development Assistance Programme, Inc. (PDAP)

The trainees visit their seaweed farms during a practical examination

In an island like Sitangkai, Tawi-Tawi, where bounty from the sea is the source of life, its residents must find the means to sustain their resources, livelihood and ways of survival.

For *pondohans* (a cluster of communities composed of 35-100 households engaged in seaweed farming) in Sitangkai, the introduction of the *Seaweed productivity enhancement through education and extension* project (SPE3) into their communities was the answer they were waiting for.

The SPE3 Project is supported by the Philippine Development Assistance Programme Inc (PDAP), a non-stock, non-profit organization which aims to reduce poverty and inequity in the Philippines.

AQD Visiting Scientist Dr. Anicia Hurtado provided technical skills training on season-long seaweed productivity improvement. The techniques imparted to the trainees are the results of AQD's decades-long research-and-development on seaweeds.

A total of 109 trainees from the first batch were able to graduate from the program with impressive growth and noticeable changes in several aspects of their lives.

One of the outstanding turnouts was Mr. Julpie Abdul, a core leader of the trainees who was one of the first to implement the new technology he had learned on his crops. He said that he could only make 300 seaweed lines previously. With SPE3's intervention, he was able to make twice, or sometimes more, of what he yielded before.

Another successful trainee is Mr. Jarson Jalain, also a core leader in the *pondohan* in Sikulan. He said that previously, most of his crops were spoiled by diseases, resulting to very low yields. With the knowledge he got from SPE3, he was able to increase his yield by up to 7000 lines more, compared to just 1000 lines before. Because of better harvests, he is now happily married. He was able to provide a dowry from his seaweed income.

But the most surprising success story was Mr. Ummik Sabung's. He harvested a total of PhP100,000 from his initial PhP1,000 capital. Nowadays, Ummik is considered as one of the wealthiest seaweed farmers in Sikulan, and is now a seedling provider.

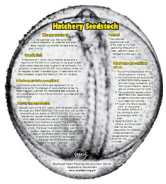
Read the full version of this story online at http://aqdnews.blogspot.com/2009/09/from-out-of-school-youth-to.html.

AQD's new flyers

Twelve new flyers, hot off the press, showcase AQD's various products and services, as well as technology profiles of some aquaculture commodities. These flyers are also freely downloadable from the AQD website at www.seafdec.org.ph/publications_downloadable.html.

AQD officials & commodity contact persons, a bookmark-type publication

AQD laboratory services, on various diagnostic services and rates



Hatchery seedstock, information on AQD's hatchery seedstock, details on prices and payment of various seedstock for sale

Aquaculture training, contains schedules, fees, contact information on AQD's training programs, including internships and on-the-job training

Backyard hatchery, a 4-page flyer on the abalone and marine fish small-scale hatchery situated at AQD's Tigbauan Main Station

Seed production of bighead carp, includes basic information on the breeding and larval rearing of the bighead carp *Aristichthyis nobilis*

Grow-out production of bighead carp, on the grow-out culture of *A. nobilis*

Seed production of giant freshwater prawn, on the broodstock, larval rearing and nursery of the giant freshwater prawn *Macrobrachium rosenbergii*

Grow-out production of giant freshwater prawn, information on the grow-out culture of *M. rosenbergii* in ponds and cages

Hatchery & nursery of grouper, contains technology profiles and techniques in the hatchery and nursery of the grouper *Epinephelus* spp.

Grow-out culture of grouper, information on site selection and culture techniques in the grow-out of *Epinephelus* spp.

Mud crab culture, includes site selection, culture conditions and methods, and financial indicators on the pond culture of the mud crab *Scylla serrata*

Dr. CLM retires from AQD

Dr. Clarissa Marte officially retired from AQD last September 15 after almost three decades of service.

She started working at AQD in 1977 as a Research Associate and eventually rose up the ranks. Among the positions she held during her long and distinguished career included the following: Head of Igang Substation; Supervisor of the Microtechnique Service Laboratory; Project Leader of the Finfish Broodstock Project, Technical Team Member of the National Bangus Breeding Program; and Head of the Breeding Section of the Research Division. She eventually headed two divisions of AQD: the Research Division (1987-1991; 1995-2003) and the Technology Verification and Demonstration Division (2007-2009).

Dr. Marte's research work has focused on the reproductive endocrinology of marine fishes, particularly that of milkfish. Moreover, she was actively involved in AQD's implementation of the Coastal Fishery Resources Management (CFRM)Project in Malalison Island in Culasi, Antique. In the process, she has authored and co-authored more that 40 papers published in local and international journals.

AQD Chief Dr. Joebert Toledo paid tribute to Dr. Marte, saying that she was his first boss. He considered Dr. Marte not only as a supervisor, but also a mother. He also remarked that given her experience as a researcher, AQD needs her wisdom and advice. Dr. Toledo expressed hope that she always have a place in her heart for AQD.

In his message, Deputy Chief Dr. Teruo Azuma said that the AQD community has a lot of respect for Dr. Marte. He also said that while he will miss her, he hoped that she could find time to visit AQD.

Training & Information Head Mr. Renato Agbayani reminisced that it was 50 years ago that he first met Dr. Marte when they were still high school students at the University of the Philippines Preparatory School. He also spoke of the time they worked together in Malalison, calling it an experience worth learning. "*Mabuhay ka*!" said Mr. Agbayani.

Other AQD staff also spoke about their experiences working with Dr. Marte, and they considered her not only as a boss but also as a friend, sister, tennis competitor, and an inspiration to the younger people at AQD.

Dr. Marte thanked everyone for their heartwarming messages and was glad that all of her efforts were appreciated. She also noted that many of those who worked under her have progressed into really good scientists and researchers. She also said that although she has retired, she will still be around for AQD.

As she begins another chapter in her journey, AQD wishes Dr. CLM good luck, godspeed, and all the best in her future endeavors.

Passages @ AQD

(From left) Dr. Lacierda, Dr. Quinitio, Dr. Marte and Dr. Toledo celebrate their birthdays this September

Birthday celebration. AQD Chief Dr. Joebert Toledo (Sept. 14), TVDD Head Dr. Marte (Sept. 11), Scientist Dr. Emilia Quinitio (Sept. 11), and former AQD Scientist Dr. Erlinda Lacierda (Sept. 11) jointly celebrated their birthdays last September 11. Well-wishers from AQD attended the party held at the RD lobby.

Designation. Dr. Toledo was designated as Head of TVDD in concurrent capacity from September 16 until the designation of the new TVDD head.

Bereavement. The AQD community condoled with the family of AQD Chief Dr. Toledo, whose father, Mr. Francisco Coruña Toledo, passed away last September 19 at the age of 79.

Fish harvests from July-September

Milkfish, pompano, seabass, snapper, grouper and tilapia harvested from AQD's Dumangas Brackishwater Station, Igang Marine Station and a project site in Dingle, Iloilo were enjoyed by AQD staff.

Below is the list of bountiful fish harvests from July-September.

Source	Fish	Date of harvest	kg sold	Value (PhP)
DBS	Seabass	July 8	60	10,560.00
		July 17	74	11,940.00
		July 24	31.7	6,427.00
IMS	Grouper	September 18	7	2,100.00
	Milkfish	July 8	274.75	30,222.50
	Pompano	July 8	15.55	3,032.25
		July 24	94.05	18,339.75
		August 14	103	20,085.00
		August 20	48	9,360.00
		August 28	57.75	11,261.25
		September 4	95	16,150.00
		September 11	44.25	7,522.50
		September 18	10.5	8,500.00
	Seabass	September 4	9	1,710.00
		September 18	50	1,995.00
	Snapper	August 20	3	570.00
		September 4	21	3,990.00
		September 18	9.8	1,902.00
Dingle, Iloilo	Tilapia	September 22	94.9	7,592.00

e-groups @ AQD

Concerned AQD staff can now get in touch with each other more efficiently through e-groups. Instead of typing several e-mail addresses when composing a message, a sender may just type the name of the e-group, and all the members of that group receive the message. It also facilitates tracking replies and actions made by the group.

Below is the list of e-groups being used at AQD.

Name of e-group	Members
all@seafdec.org.ph	all AQD staff
senior_staff@seafdec.org.ph	all senior staff of AQD
researchers@seafdec.org.ph	all scientists and researchers of AQD
mancom@seafdec.org.ph	for members of the AQD Management Committee
dream_team@seafdec.org.ph	for AQD staff involved in the *Institutional capacity development for sustainable aquaculture* (ICD-SA)
rtc2010@seafdec.org.ph	for AQD staff involved in the 2010 Regional Technical Consultation on Aquaculture
prc2009@seafdec.org.ph	for members of the 2009 Publications Review Committee
sdp2009@seafdec.org.ph	for members of AQD's Staff Development Program for 2009
devcom_staff@seafdec.org.ph	for AQD staff under the Development Communication Section
housing@seafdec.org.ph	for staff who are residents of AQD's housing units

Typhoon Ondoy affects BFS

Typhoon Ondoy (international name: Ketsana), which hit the Philippines last September 24-26, left behind massive damage to lives and properties in its wake. AQD's Binangonan Freshwater Station (BFS) was not spared of its fury.

Some BFS pens and cages in both the east and west coves of Tapao were submerged. BFS staff managed to retrieve stocks from the submerged cages and transfer them to tanks. The BFS disaster brigade, headed by Technician Federico Reyes, together with guards of the Carmela Security agency, helped save 75% of the lake-based stocks. Some that were affected included the catfish stocks of Associate Researcher Ms. Antonietta Evangelista, prawn and tilapia stocks of Scientist Dr. Ma. Lourdes Aralar, and non-experimental carp stocks.

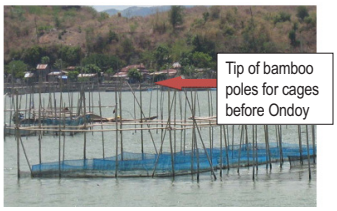
Aside from these, Typhoon Ondoy did not cause as much damage to BFS as Typhoon Milenyo did in 2006.

Evacuees find refuge at BFS. The intense rain brought about by Typhoon Ondoy caused massive flooding in the area, displacing many families. Because of this, the Sangguniang Barangay of Pipindan, through Barangay Captain Hoseas Montevilla, requested BFS Head Engr. Emiliano Aralar to let the families use the BFS Dormitory Building as an evacuation center. There are 20 families staying in the dormitory, with a total of 90 persons, including children.

BFS staff brought relief goods (food and clothes) for distribution to the evacuees.

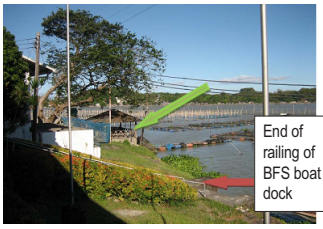
At left are some of the images of the destruction brought about by the typhoon.

BFS structures before... ... and after Ondoy

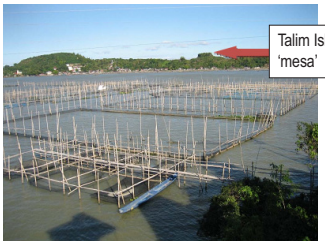


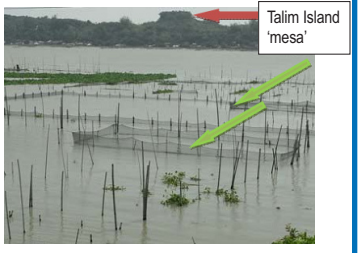
BFS floating cage and fixed cage modules for freshwater prawn

Catfish cages in the West Cove of Tapao before (left) and after Ondoy



BFS boat dock (red arrow) and sampling hut (green arrow). The boat dock and base of the sampling hut became partially submerged





Fish pens and cages at BFS. Green arrows on the picture at right show the temporary cage setup to hold recovered stocks

From top: Engr. Aralar (leftmost) talks with three generations of evacuees; cooking and washing clothes outside the dormitory; a two-month-old baby is the youngest evacuee; and a family takes shelter in the dormitory

A call for energy conservation

Did you know that the monthly electric bill for AQD's Tigbauan Main Station alone now exceeds PhP1.5 million? Of this, it is estimated that air conditioners consume almost half of the energy requirement during office hours.

Let's do our share to conserve energy! Everyone is enjoined to limit their aircon use from 9 AM to 4 PM only (except for rooms with sensitive equipment) during office days, and only when necessary during overtime. Please switch off lights, computers and other equipment when not in use.

"Let's make it a habit!" AQD Chief Dr. JD Toledo enjoined the employees.

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For contributions and feedback, kindly email: devcom@seafdec.org.ph

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